

SOME UNDESCRIBED NORTH AMERICAN MALTHINI¹

(Coleoptera:Cantharidae)

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A small selection of Malthini recently received from Dr. J. N. Knull of Ohio State University, contained representatives of three undescribed species of the genus *Malthinus* and one of the genus *Malthodes*. Dr. and Mrs. Knull seem to have a faculty for collecting the rare and novel species in this tribe. They collected the types of one species of *Malthinus* and six of *Malthodes* as well as numerous paratypes of other species included in my original study of this tribe. Types of the four species described here are to be deposited in the Knull collection.

The key to the species of the genus *Malthinus* is herein revised to accomodate the new species described below.

***Malthinus chisosensis* Fender, new species**

(figs. 1, 2)

Black, head in front of eyes dark brown, prothorax reddish orange, elytral apices dark olivaceous, abdominal sternites 3 to 5 rather widely testaceous apically and at sides, more widely so towards the sides, pubescence cinerous, fine, sparse and sub-decumbent. Length of male: 3 mm.

Male.—Head feebly shining, wider than pronotum, finely sparsely punctured, eyes prominent, antennae moderately slender, segments 2 to 4 progressively longer, intermediate segments about 4 times as long as wide; pronotum shining, transverse, about a third wider than long, anterior margin arcuate and narrowly beaded to the feebly produced and obliquely truncate anterior angles, sides feebly arcuate, nearly parallel, hind angles obtusely rounded, basal margin more strongly arcuate than anterior margin, guttered, more strongly so towards the sides, disc finely rather closely punctured; scutellum finely punctured, apex triangularly notched; elytra abbreviated, extending to apices of the metacoxae, apically narrowed and dehiscent, coarsely, confusedly rugose punctate to the tumid and finely punctured apices; body beneath finely closely punctured, a little more sparsely, coarsely so on abdominal sternites; male terminal abdominal segments: apical margin of fifth sternite broadly emarginate, apex of the emargination truncate, sides sinuate; sixth sternite widely, deeply, concavely emarginate; seventh sternite narrowly deeply emarginate, apex of the emargination arcuate, as viewed ventrally, two overlapping plates in the emargination of the seventh sternite, above this a long, slender, apically forked ventral accessory process, forks narrowly separated, the tips acute; ultimate tergite longer than broad, narrowed medially, subtruncately rounded apically; as viewed laterally, ventral acces-

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²Malthini of North America. Fender, Amer. Midl. Nat., 1951, 4(3):513-629.

sory process arcuately ascending, above this a slender, straight, rod-like appendage directed distad, the tip rounded, ultimate tergite ovate.

Female.—Unknown.

Holotype male from CHISOS MTS. TEXAS, July 8, 1955, was collected by D. J. & J. N. Knull.

***Malthinus knulli* Fender, new species**

(figs. 3, 4)

Head rufous, clypeus brunneous, eyes, antenna and palpi black, a wide arcuate black interocular fascia, prothorax rufous, scutellum, elytra, rest of body beneath the legs black, pubescence aureous, short, fine and sparse. Length of male: 4 mm., female 4.5 mm.

Male.—Shining, head wider than pronotum, suborbicular, arcuately narrowed behind eyes to neck, finely sparsely punctured in front of eyes, more coarsely so behind and on neck, eyes prominent, antenna moderately slender, extending to tip of abdomen, second segment about three fourths the length of third, third and fourth segments equal, intermediate segments about four times as long as wide; pronotum transverse, about a third again as wide as long, anterior margin arcuate and widely beaded, anterior angles rounded, sides deflected, narrowly arcuate to feebly prominent and obtusely rounded hind angles, basal margin arcuate towards sides, shallowly emarginate medially, widely beaded, disc smooth, sparsely micropunctate; scutellum finely punctured, apex widely shallowly emarginate; elytra short, apically dehiscent, extending to apices of metacoxae, coarsely, sparsely, confusedly rugose-punctate, apices rounded and finely, more closely punctured; body beneath finely, moderately closely punctured, sixth sternite wide, deeply, arcuately emarginate at apex, seventh sternite oval, apex narrowly, triangularly nicked, ultimate tergite truncate, ventral accessory process narrow, arcuately ascending apically, apical third furcate, the forks divergent, the tips acute.

Female.—Similar to male, eyes smaller and less prominent, (antennae missing in allotype); elytra extending to middle of second visible abdominal sternite; abdominal sternites piceous, sixth sternite shallowly emarginate, seventh sternite strongly narrowed apically, the apical margin with a moderately wide, moderately deep median notch.

Holotype male from DAVIS MTS., TEXAS, June 9, 1954, was collected by D. J. & J. N. Knull. Allotype female same locality and collectors but collected on July 14, 1957.

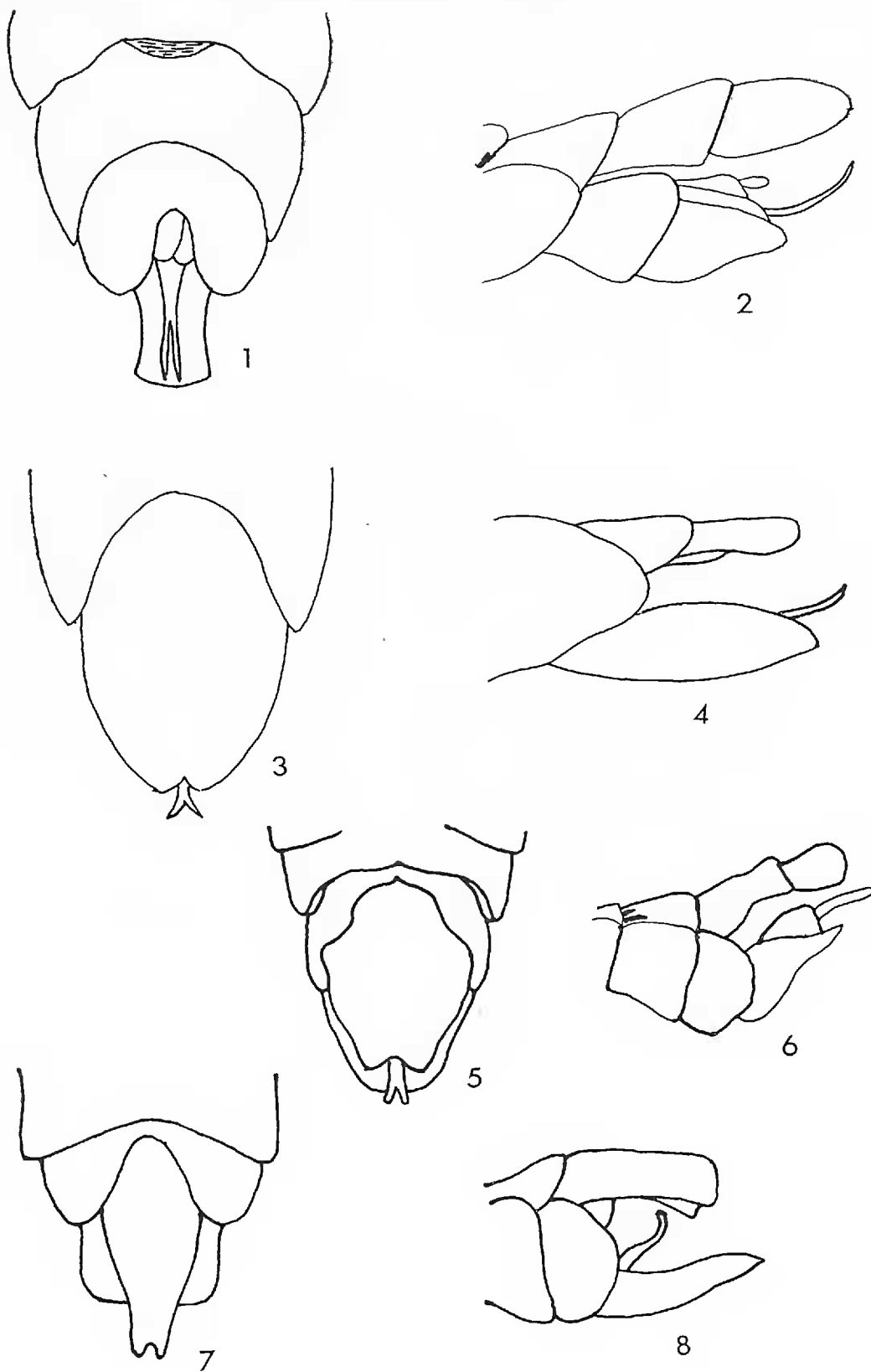
Similar to *Malthinus bicolor* LeConte from which it can be separated by the arcuate black interocular fascia and the characters of the male terminal abdominal segments.

***Malthinus fjellandi* Fender, new species**

(figs. 5, 6)

Head orange with an arcuate black interocular fascia extending medially back onto neck, a narrower longitudinal lateral stripe, on each side, extending from behind eye to the neck, eyes and antennae black, basal antennal segment paler beneath, prothorax orange, scutellum and elytra black, elytral apices

creamy yellow, body beneath piceous, thoracic sutures, apices of abdominal sternites, apices of coxae and femora and bases of femora paler, pubescence



EXPLANATION OF FIGURES

Figs. 1-8, Male terminal abdominal segments (odd numbers = ventral aspect; even numbers = lateral aspect): figs. 1, 2. *Malthinus chisosensis*; figs. 3, 4. *Malthinus knulli*; figs. 5, 6. *Malthinus fjellandi*; figs. 7, 8. *Malthodes rhadinus*.

cinerous, fine and sparse. Length male: 3.5 mm.

Male.—Head shining, wider than pronotum, finely scabrose throughout, antennae slender, extending beyond tip of abdomen, segments two to four progressively longer, intermediate segments about four times as long as wide, eyes prominent; pronotum transverse, about three fourths as long as wide, anterior margin feebly arcuate, anterior angles rounded sides sinuate, feebly convergent to obtusely rounded basal angles, basal margin more strongly arcuate than anterior margin and widely deeply beaded, more strongly so towards sides, disc finely closely punctulate, middle of each lateral half with a moderately large but low tumid area; scutellum finely punctured, apex deeply notched, the notch apically truncate; elytra abbreviated and dehiscent, extending to base of third visible sternite, coarsely, sparsely, confusedly punctured to the tumid and finely punctured apices, a subsutural and one discal costa feebly evident; body beneath finely punctured, abdominal sternites more coarsely so; fifth sternite apically emarginate, the emargination in the form of a printer's brace, sixth sternite widely deeply trifoliately emarginate, seventh sternite elongate, sides sinuately convergent to shallowly emarginate apex, apex of the emargination rounded, the tips rounded; in lateral view, seventh sternite subtriangular, apex acute, penultimate tergite elongate, apically truncate, ultimate tergite shorter, narrowed towards base, the apex subtruncately rounded, ventral accessory process directed caudad, slender, the tip rounded.

Holotype male from HUACHUCA MTS., ARIZONA, August 7, 1953 was collected by D. J. & J. N. Knull.

Named for Mr. Frank Fjelland, whose friendship and insistent help in mundane tasks have facilitated these studies.

KEY TO NORTH AMERICAN SPECIES OF MALTHINUS

1. Elytra coarsely striate-punctate2
Elytra more finely, confusedly punctate4
2. Elytra black with the apical tumidities dark olivaceous
.....*atripennis* LeConte
Elytra testaceous with the suture more or less widely infus-
cate3
3. Male seventh sternite entire, ovate*occipitalis* LeConte
Male seventh sternite narrowly deeply incised at the apex
.....*difficillis* LeConte
4. Pronotum finely closely granulate*granicollis* Fender
Pronotum finely sparsely punctured5
5. Pronotum piceous with four discal spots and the anterior and
posterior margins narrowly pale*quadrinotatus* Fender
Pronotum pale, sometimes with a narrow median dark stripe6
6. Head, except mandibles, dark*chisosensis* Fender
Head, besides mandibles, at least in part pale7
7. Head black behind the antennae*subcostatus* Schaeffer
Head at least partially pale behind the antennae8

8. Head red with a black transverse, subtriangular interocular fascia that medially may extend well down on the neck9
 Head, except eyes and antennae, entirely pale10
9. Elytra black*knulli* Fender
 Elytral apices creamy yellow*fjellandi* Fender
10. Elytral apices pale creamy yellow, body beneath testaceous*tricolor* Fender
 Elytral apices dark olivaceous, body beneath piceous11
11. Male seventh sternite elongate, produced*bicolor* (LeConte)
 Male last sternites short, transverse*huachucae* Fender

Malthodes rhadinus Fender, new species

(figs. 7, 8)

Black, clypeus testaceous, pronotum fuscotestaceous, lateral margins narrowly black, abdomen fuscous, basal sternites paler, all coxae and bases of all tibiae piceous, pubescence cinereous, fine, short and inconspicuous. Length 3.5 mm.

Male.—Shining, head wider than pronotum, finely sparsely punctured in front of eyes, coarsely closely so behind and on neck, eyes large and prominent, separated by less than their combined widths, antennae slender, extending to tips of wings in repose, second segment shorter than third, third and fourth segments equal, intermediate segments about four times as long as wide; pronotum transverse, anterior margin arcuate and coarsely beaded, anterior angles obliquely rounded, sides nearly straight, feebly convergent to the narrowly reflexed, obtuse hind angles, basal margin arcuate and coarsely beaded, disc rather coarsely punctured, becoming finely scabrose towards hind angles, a broad longitudinal median impression anterior to and near the middle of each lateral half; scutellum apically subtruncate, finely sparsely punctured; elytra rugose punctate; thorax beneath sparsely coarsely punctured, more finely closely so on abdominal sternites; sixth sternite broadly, deeply, arcuately emarginate, seventh sternite elongate, broad basally, sides sinuately convergent to shallowly, arcuately notched apex, tips rounded, ultimate tergite broad, apically truncate; in lateral aspect, seventh sternite arcuately ascending apically, rather thick, tip acute, ultimate tergite elongate, laterally arched and apically truncate, ventral accessory; process unevenly sinuately ascending apically, the tip rounded.

Holotype male and one male paratype from 5 MILES EAST OF MINERAL, TEHAMA COUNTY, CALIFORNIA, June 20, 1960, were collected by D. J. & J. N. Knull.

This species belongs to my group I of the genus where it runs to *Malthodes basalis* LeConte and *M. pictithorax* Fender. These species have the pronotum finely sparsely granulose, the sides of the seventh sternite (as viewed ventrally) arcuate and do not have visible ventral accessory processes. In addition, *M. basalis* has the basal two antennal segments pale.